

EARTH AND SPACE SCIENCE/ SECONDARY MAJOR, BACHELOR OF ARTS IN EDUCATION (BAE)

This is an interdisciplinary major—see an advisor to determine if courses required by this major may be taken in partial fulfillment of the BACRs.

Note: this major takes more than 12 quarters at 15–16 credits a quarter.

Grade Requirement for Earth and Space Science BAE: ≥ 2.8 cumulative average and $\geq C$ in each course.

Secondary Education students must complete the required Secondary Education Core and the following courses.

Earth and Space Science Required Courses

CHEM 171 & 171L	GENERAL CHEMISTRY I and GENERAL CHEMISTRY LABORATORY I	5
GEOS 100	DISCOVERING GEOLOGY	5
GEOS 113	THE EARTH'S CLIMATE AND WEATHER	5
GEOS 222	THE EARTH THROUGH TIME	5
GEOS 305	INTRODUCTION TO OCEANOGRAPHY	5
GEOS 311	EARTH MATERIALS	4
GEOS 314	WEATHER FORECASTING	5
GEOS 320 or GEOS 360	ENVIRONMENTAL GEOLOGY or GEOLOGIC HAZARDS	4
GEOS 410	GEOMORPHOLOGY	5
MATH 142	PRECALCULUS MATH II	5
PHYS 121	DESCRIPTIVE ASTRONOMY	5
PHYS 131	INTRODUCTORY PHYSICS I	4
PHYS 161	MECHANICS LABORATORY	1
SCED 390	SCIENCE TEACHING METHODS	5

Electives—students must take field-oriented coursework from the list 4-5 below or from special field courses in GEOS approved by the Earth and Space Science advisor.

GEOS 201	RESEARCH METHODS	
GEOS/BIOL 312	FUNDAMENTALS OF SOIL SCIENCE	
GEOS 315	WATER RESOURCES	
GEOS 325	WETLAND SCIENCE I	
GEOS 455	GEOLOGY FIELD TRIP	
GEOS 496	EXPERIMENTAL COURSE	

Required Senior Capstones—must be taken concurrently

SCED 490A	SCIENCE TEACHING CAPSTONE SEMINAR	3
SCED 490B	SCIENCE TEACHING CAPSTONE FIELD APPLICATION	2

Total Credits 72-73

Education (<http://catalog.ewu.edu/ps/se/>)

Secondary Education Core

EDUC 303 & EDUC 309 & EDUC 341 & EDUC 386A & EDUC 413	FOUNDATIONS OF ASSESSMENT and FOUNDATIONS OF SECONDARY CLASSROOM MANAGEMENT and SECONDARY STRATEGIES, MANAGEMENT, ASSESSMENT and FIELD EXPERIENCE AND PRACTICUM and CONTENT AREA LITERACY: MANAGEMENT AND ASSESSMENT FOR SECONDARY EDUCATION CANDIDATES	15
EDUC 386B & EDUC 427	FIELD EXPERIENCE AND PRACTICUM and GENERAL STUDENT TEACHING K-12 (These are variable credit courses. The minimum for each is 3 credits.)	6-15
EDUC 426	SECONDARY STUDENT TEACHING 7-12	12

Total Credits 33-42

University Competencies and Proficiencies

English (<http://catalog.ewu.edu/undergraduate-degree/#newitemtext>)
 Quantitative and Symbolic Reasoning (<http://catalog.ewu.edu/undergraduate-degree/#mathcompproficienciestext>)
 Placement and Clearance (<http://catalog.ewu.edu/placement/>)
 Prior Learning/Sources of Credit AP, CLEP, IB (<http://catalog.ewu.edu/prior-learning/>)

General Education Requirements (<http://catalog.ewu.edu/undergraduate-degree/#generaleducationrequirements>) (GER)

- Minimum Credits—180 cumulative credit hours
 - 60 upper-division credits (300 level or above)
 - 45 credits in residence (attendance) at Eastern, with at least 15 upper-division credits in major in residence at Eastern
- Minimum Cumulative GPA ≥ 2.0

Breadth Area Core Requirements (BACR)

Humanities and Arts (<http://catalog.ewu.edu/undergraduate-degree/#humanitiesandfineartsgecrttext>)
 Natural Sciences (<http://catalog.ewu.edu/undergraduate-degree/#naturalsciencesgecrttext>)
 Social Sciences (<http://catalog.ewu.edu/undergraduate-degree/#socialsciencesgecrttext>)

University Graduation Requirements (<http://catalog.ewu.edu/undergraduate-degree/#universitygraduationrequirements>) (UGR)

Diversity Course List (<http://catalog.ewu.edu/undergraduate-degree/#cultureandgenderdiversityintheuslisttext>)
 Foreign Language (<http://catalog.ewu.edu/undergraduate-degree/#foreignlanguageugrttext>) (for Bachelor of Arts)
 Global Studies Course List (<http://catalog.ewu.edu/undergraduate-degree/#internationalstudiesrequirementtext>)
 Minor or Certificate (<http://catalog.ewu.edu/undergraduate-degree/#majorminororcertificateugrttext>)
 Senior Capstone Course List (<http://catalog.ewu.edu/undergraduate-degree/#capstonecourselisttext>)

Application for Graduation (use EagleNET (<https://inside.ewu.edu/eaglenet/>)) must be made at least two terms in advance of the term you expect to graduate (undergraduate and post-baccalaureate).

Use the Catalog Archives (<https://catalog.ewu.edu/archives/>) to determine two important catalog years (<http://catalog.ewu.edu/undergraduate-degree/#activecatalogruletext>).

Degree Works (<https://inside.ewu.edu/records-and-registration/degree-works/>) calculates based on these two catalog years.

- a. The catalog *in effect at the student's first term* of current matriculation is used to determine **BACR** (Breadth Area Credit Requirements) **and UGR** (Undergraduate Graduation Requirements).
- b. The catalog *in effect at the time the student declares a major or minor* is used to determine the program requirements.

Students who successfully earn a BAE in Earth and Space Science/Secondary from EWU should be able to do the following:

- apply best practices to teach earth and space science that are outlined in the Next Generation Science Standards;
- demonstrate understanding of core concepts in earth and space science;
- demonstrate effective strategies for teaching earth and space science to a community of diverse students;
- describe the procedures for responding to potential safety hazards in the laboratory, classroom, and field;
- shows evidence of integrating the three dimensions of the Next Generation Science Standards.